An Interesting case of PUO

About the patient

61/F admitted for evaluation of fever since March 2008:

- Fever high grade intermittent followed by sweating
  no evening rise or specific pattern
  no chills or rigors
  body pain+
  arthralgia involving large joints without swelling ,small joint involvement, hand joint involvement or early morning stiffness
  loss of appetite+ no significant weight loss

She was treated in her native place with only temporary relief

- Breathlessness insidious onset- exertional, gradually worsened to Class IV with orthopnoea ; no PND
- Cough with small quantity mucoid sputum, no hemoptysis
- Negative past history except for a suppurative left axillary adenitis which resolved with treatment
- Negative family history; three healthy siblings

She was hospitalized and the following investigations were done:

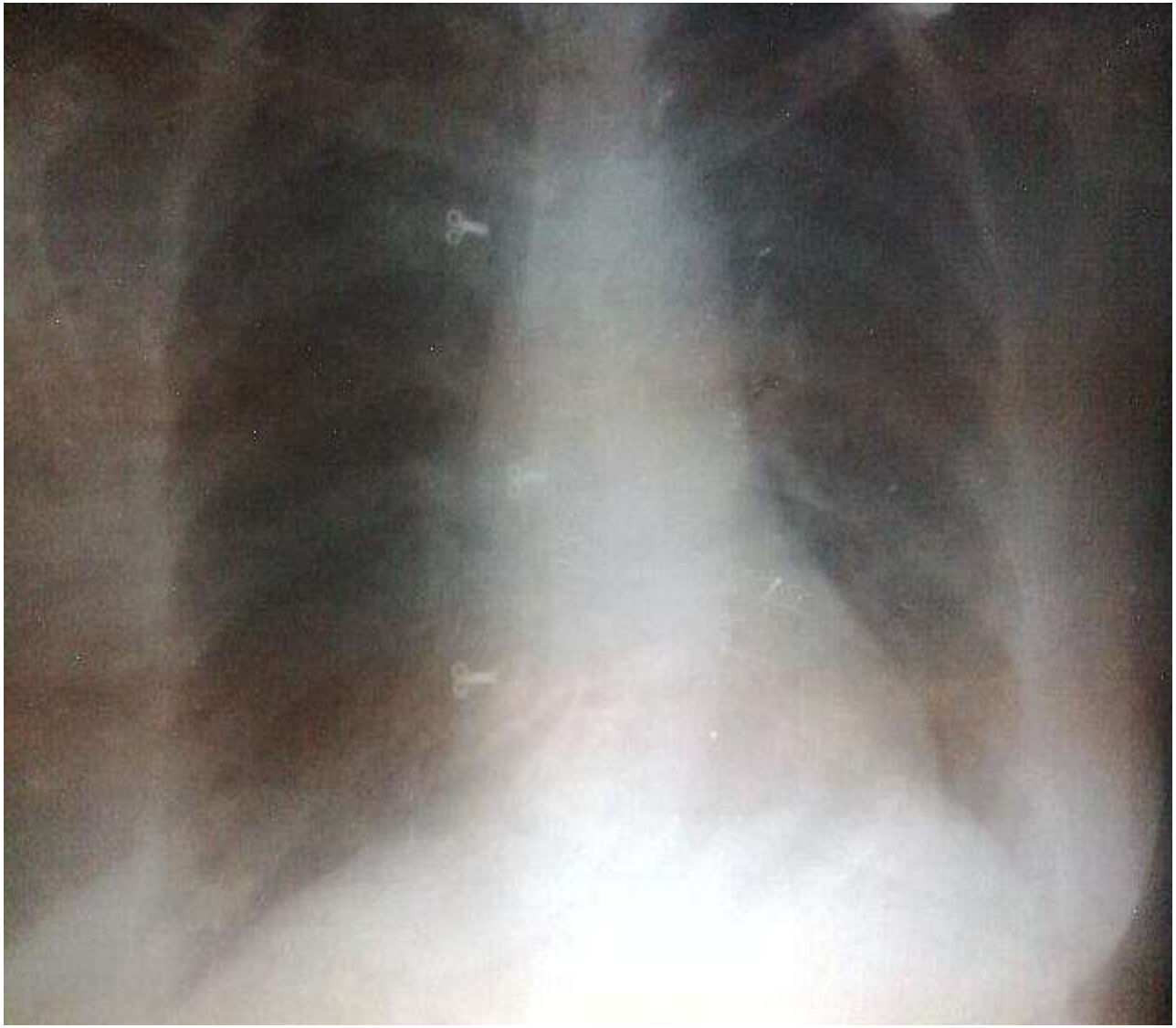
Investigations:2/4/08

Hb 12.6gm/dl
TC 9000 cells/cu mm
ESR 22/45
Urine: SG 1.005
pH 7.0
WBC 1+
RBC nil
Nitrite neg
Protein neg
Glucose neg
Ketones neg
Urobil, neg
ECG: Sinus tachycardia

CXR cardiomegaly; lung fields clear
Widal neg

US Abdomen: ***Hepatomegaly***
RK 10.8x4
LK 10.7x4
No ascites

HIV I&II neg
RFT&LFT normal
HBsAg neg
Blood C/S no growth



Contd..

Echo: Pericardial effusion 500ml with early tamponade; valves, chambers normal; no SWMA; N LV function

TFT: T3 71.69ng/dl(N 80-180)
T4 3.6mgm/dl(N 4.5-11.5)
TSH 100.960mIu/ml(N 0.35-5.5)

Cardiologist suggested medical management of effusion.

Patient was started on ATT on 4/4/08 along with Thyroxine 100mcg and discharged with a provisional diagnosis of Tuberculous Pericardial effusion,and Hypothyroidism.

CT Abdomen normal

However, she discontinued ATT and got admitted on 4/5/08.

On admission

O/E Obese lady

- Febrile
- Dyspnoeic and tachypnoeic
- No cyanosis, clubbing
- No pallor, adenopathy
- Oral ulcers+
- No skin, hair,nail or eye changes; no bony tenderness or joint swelling/deformities
- JVP not elevated; no pedal edema or facial puffiness
- Tachycardic, BP 120/70, all peripheral pulses+
- CVS: Heart sounds were normal; no gallop or murmurs
- RS: Trachea in midline; NVBS;Coarse crepitations in Rt interscapular, infrascapular, axillary,infra-axillary areas with diffuse rhonchi
- Abd : No ascites or organomegaly
- CNS:N

Investigations done :4/5/08

Hb 8.1gm/dl

TC 8900 cells/cu mm

Widal negative

ESR 20/42

Platelets 3.15 lakh

RFT & LFT N

MCV 77.6

MCHC 33.6

MCH 26.1

Peripheral smear: microcytic hypochromic anemia

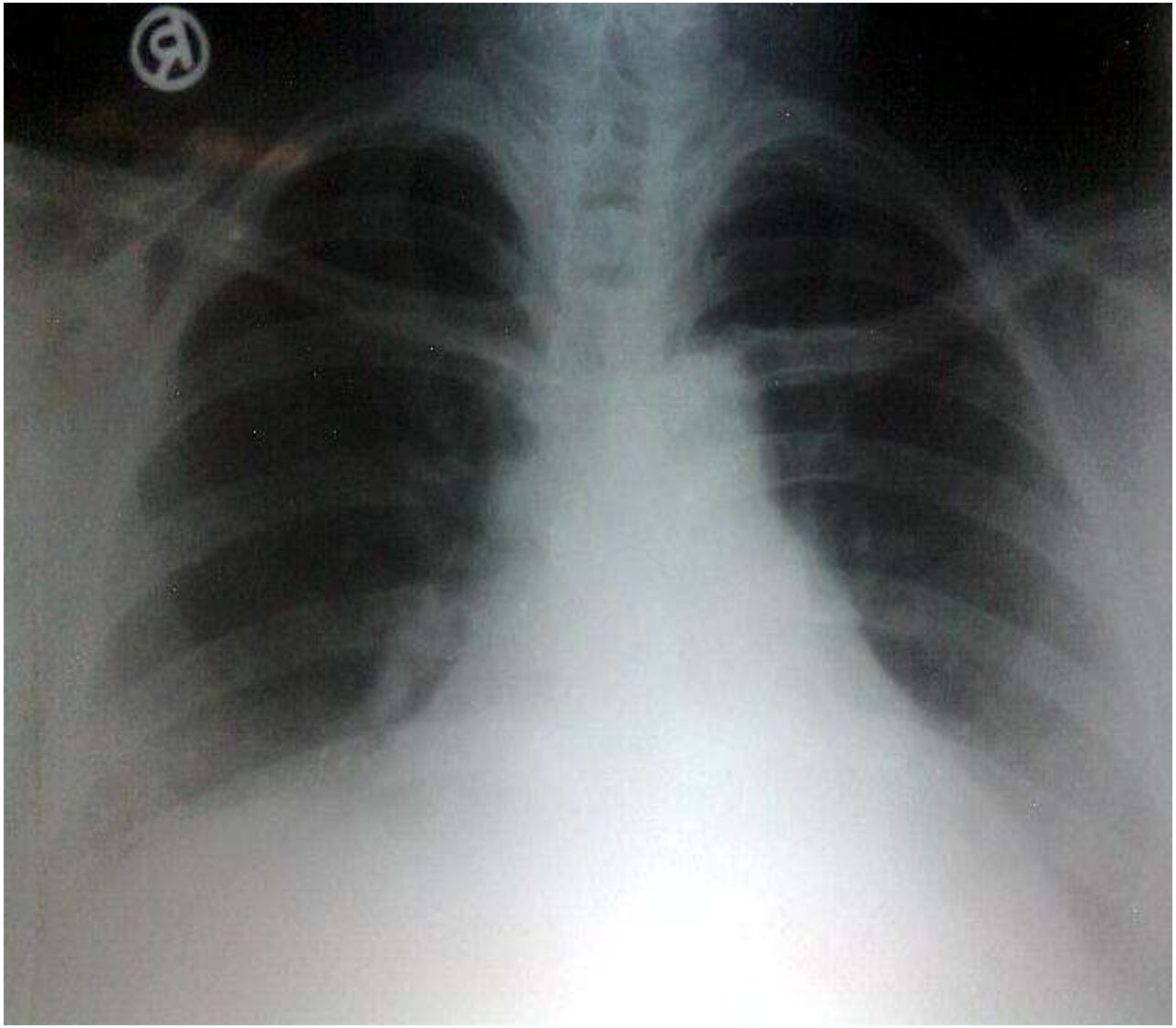
Urine analysis: albumin-nil
pus cells-3-4/hpf
RBC-nil
bacteria-nil

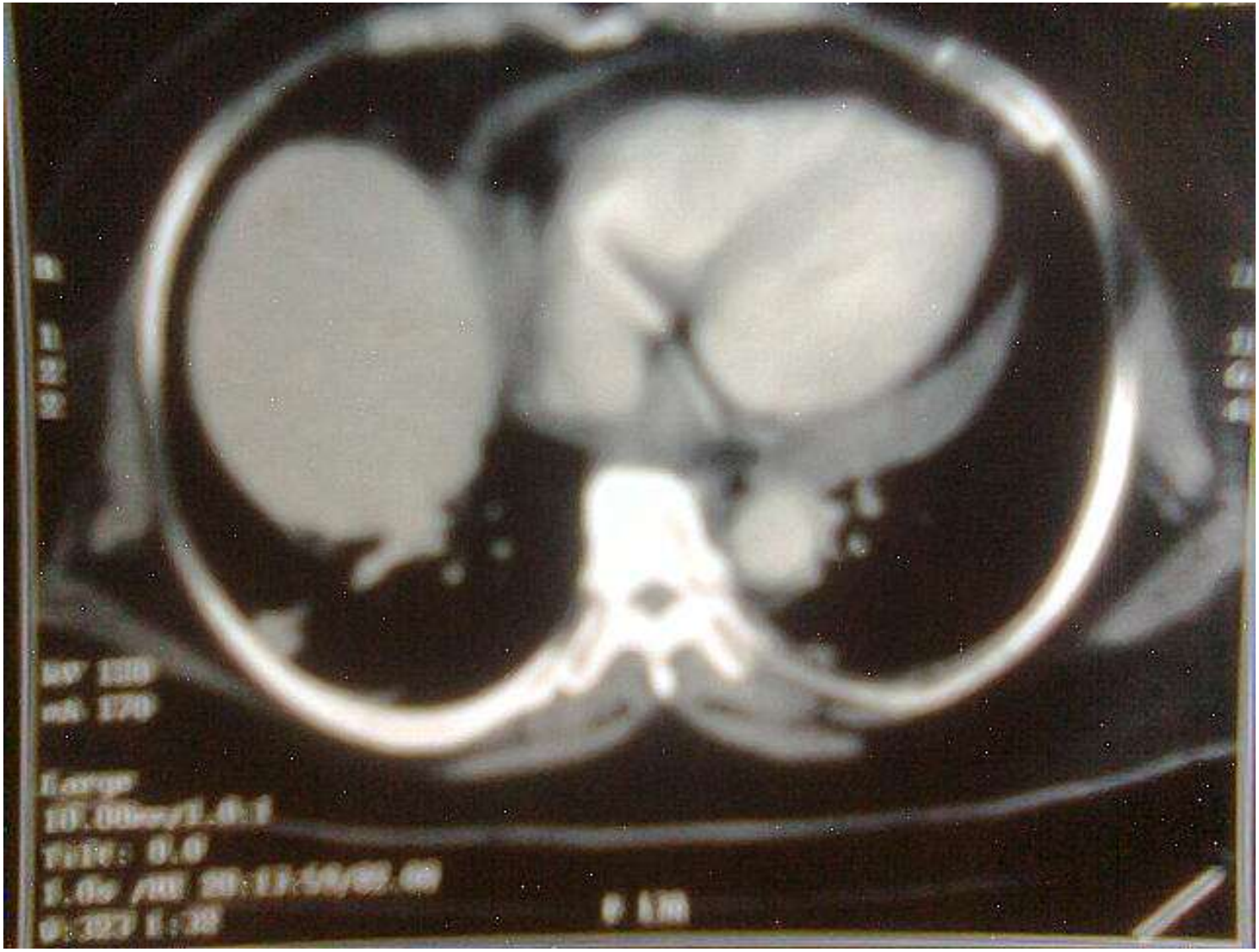
ECG Sinus Tachycardia T inv in V2-4

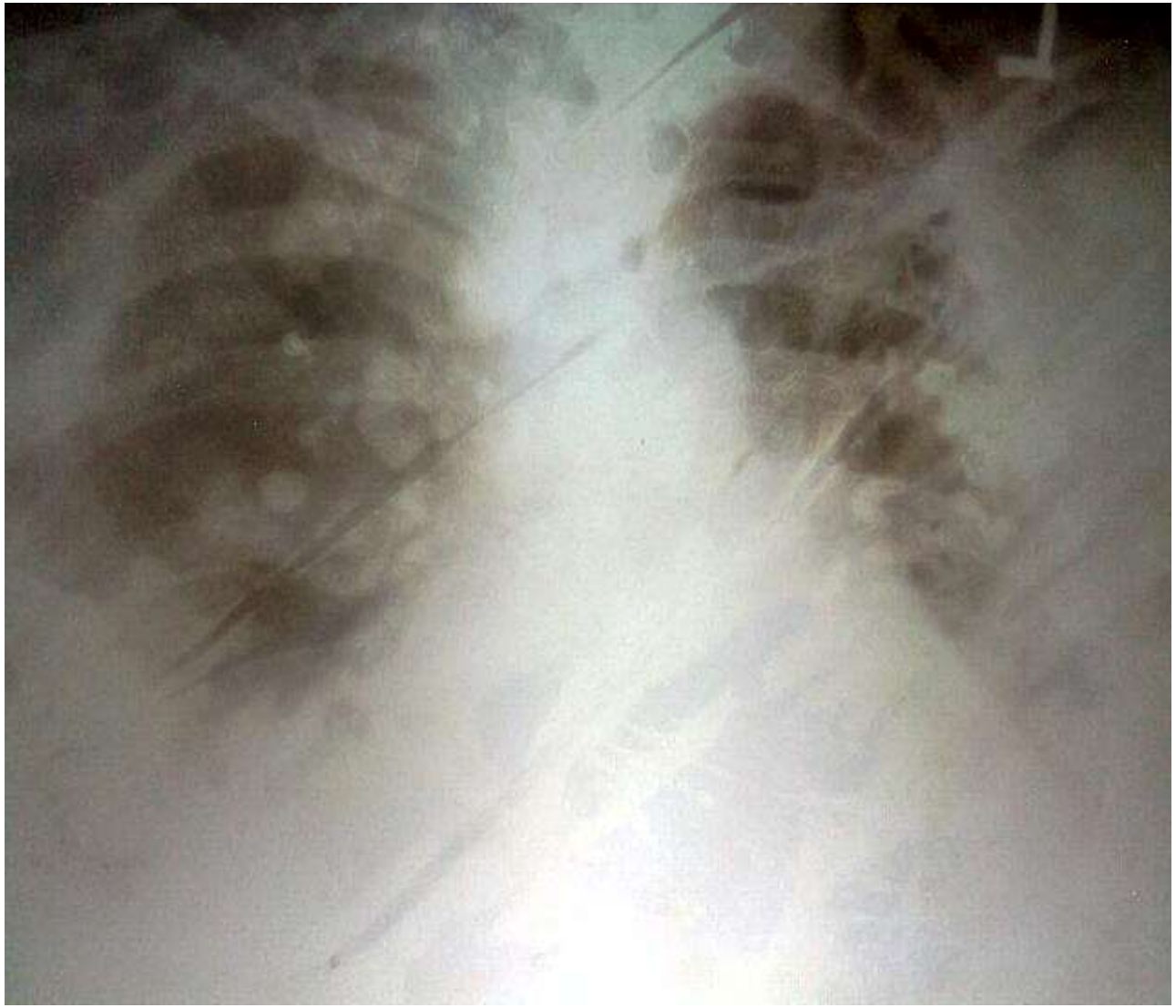
Echo Pericardial effusion; no tamponade

Cardiologist opinion conservative management

CXR Cardiac silhouette enlarged with bilateral patchy infiltrates more in right lower zone with obliteration of costo and cardiophrenic angles







Contd..6/5/08

Sputum 3 samples negative for AFB

HIV 1&2 negative

Sputum C/S Staph aureus

ASO +ve 400 IU/ml

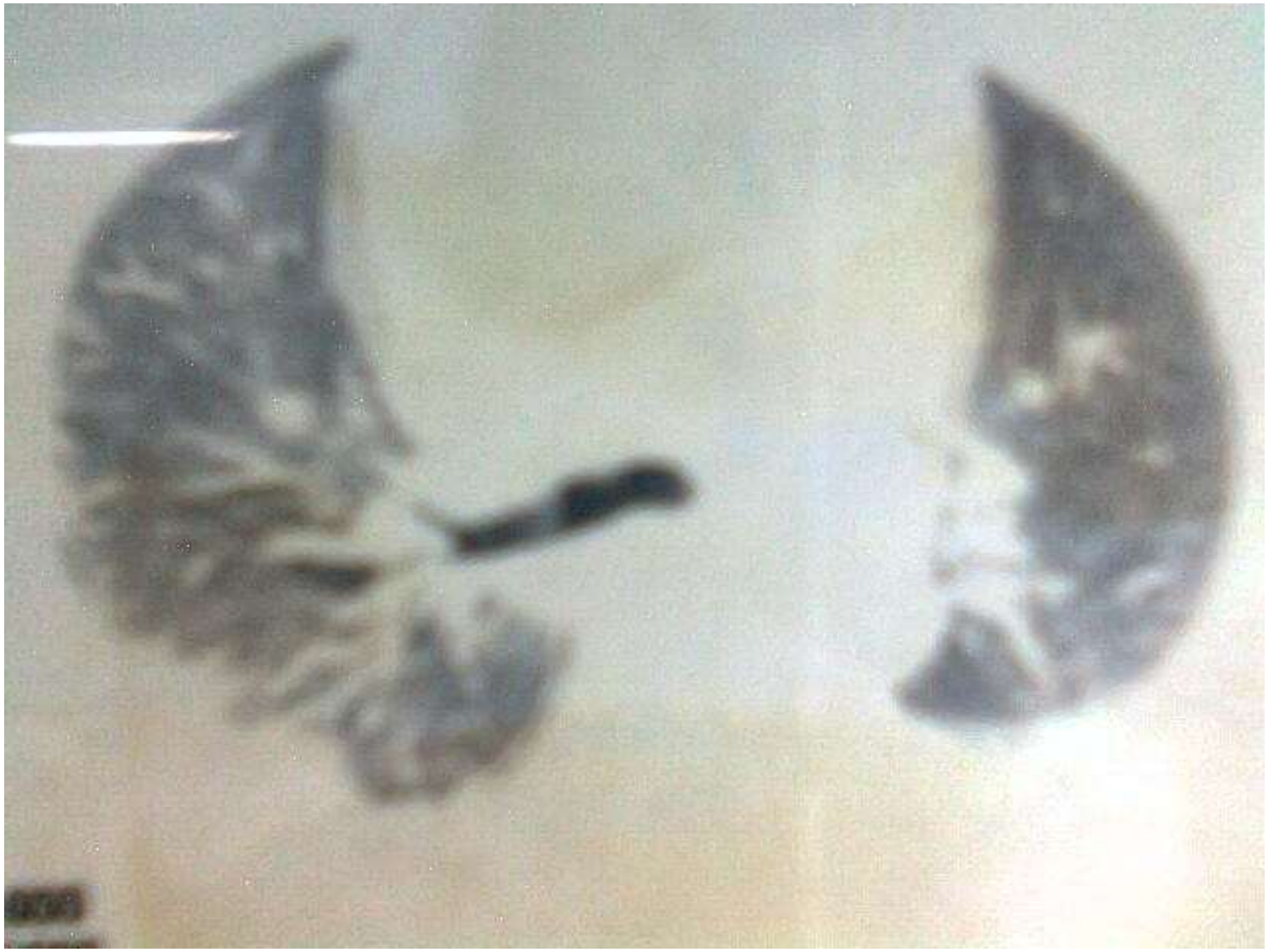
CRP +ve 96mg/dl

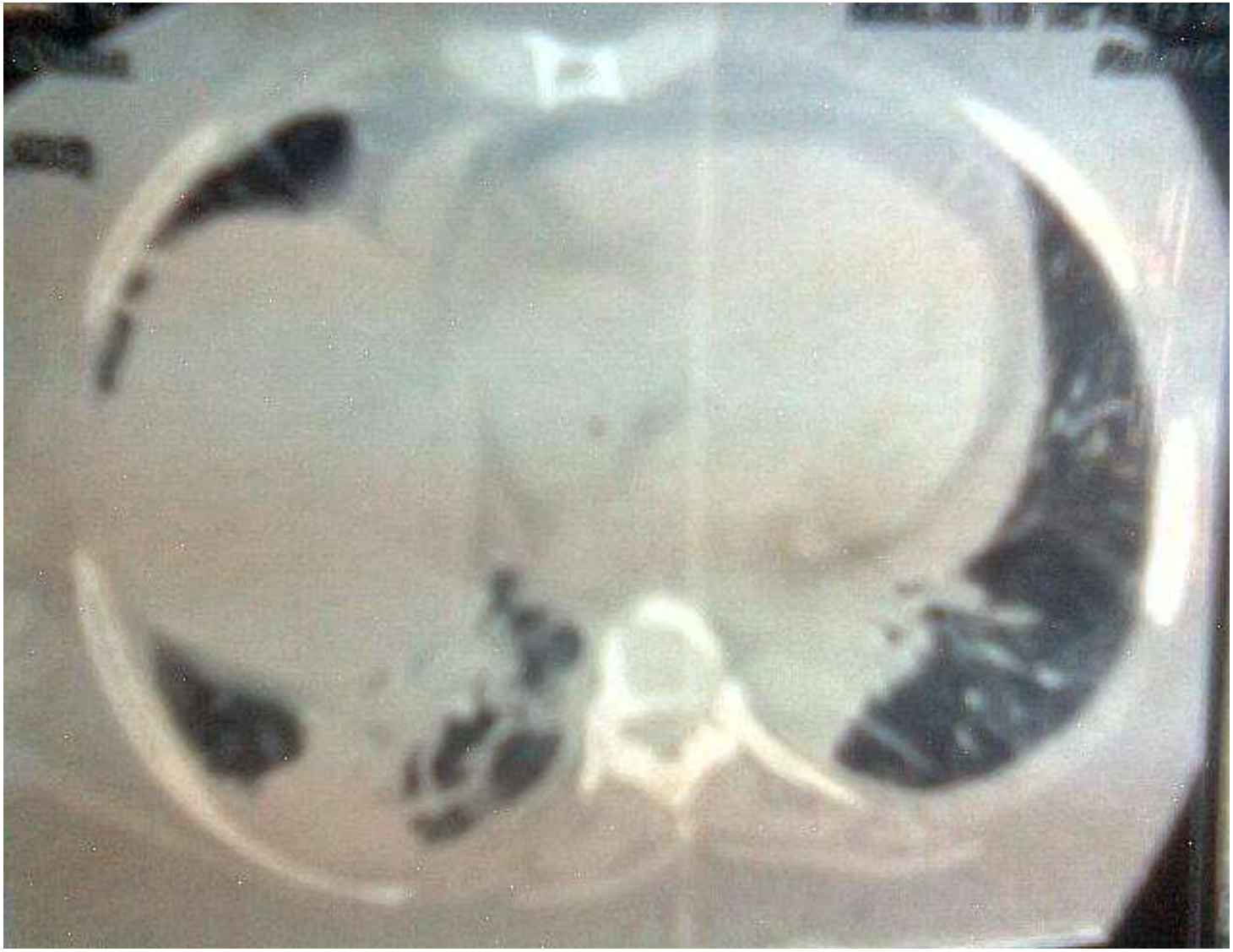
ANA +ve

CT Chest: B/L Pleural effusion

homogenous airspace opacity-posterior segment of right UL

and superior segment of right lower lobe





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Provisional Diagnosis:

SLE

*Serositis- Bilateral pleural& pericardial effusions

*Rt lower lobe consolidation:

?Infective

?Acute Lupus Pneumonitis

Treatment

- Rheumatologist opinion:

  SLE with patchy pneumonitis and serositis

  ?Infective ?Lupus pneumonitis

  For Antibiotics and Prednisolone

Repeat Sputum C/S on 14.5.08 grew Staph aureus sensitive to Vancomycin & Vancomycin started on 18.5.08

Patient continued to be febrile and tachypnoeic

Developed elevated renal parameters on 5th day and vancomycin stopped

Dyspnoea worsened and was shifted to ICU for respiratory support on 21.5.08

RFT

	8.5.08	22.5	23.5 renal lab	24.5	27.5	29.5
Urea	25	82	121	55	140	132
Creat	0.6	2.4	3.1	2.6	2.1	1.5

ABG

pH 7.495
pCO2 20.6
pO2 67.4
HCO3 15.5
BE(ecf) -7.8
O2 sat 95.2%
CO2 16.1mmol/L
Na 135 meq/L
K 4.3 meq/L

At ICU

- Anti ds DNA 30.4 U/ml

(neg <20 U/ml
pos >20 U/ml)

- Pericardiocentesis was done:

Sugar 79mg/dl
Protein 4.4gm/dl
Cells RBC-120 cells; Lymphocytes-8 cells
C/S no growth
Smear neg for AFB
ADA (fluid) 40.4 U/L
Serum ADA 69.9 U/L

- Urine C/S grew Pseudomonas

Patient was treated with antibiotics, low dose steroids (oral pred 10mg/d) and fluid management

Her metabolic parameters improved; did not require ventilation and shifted back to ward

Contd..

Patient continued to be febrile and tachypnoeic despite antibiotics

Minimal sputum production; dry cough

Repeated sputum C/S and AFB neg

Rheumatologist reviewed and suggested parenteral steroids

Started on IV Methyl Pred 1gm/d x 5 days

Patient improved from second dose.

Final Diagnosis

LUPUS PNEUMONITIS

Pleuro pulmonary manifestations of SLE

- Lupus pneumonitis
- Lymphocytic interstitial pneumonitis
- Pulmonary hemorrhage
- Pulmonary embolism associated with aPL
- Pulmonary hypertension
- Pleuritis
- Weakness of diaphragm

Lupus pneumonitis

- Acute:
  12% of active lupus
  fever,pleuritic pain,dyspnoea,cough, cyanosis
  B/L pulmonary infiltrates and effusion
  HP: alveolar damage, interstitial edema, hyaline membranes
  perivascular lymphocytic & plasma cell infiltrates- clear or persist causing PFT abn
- Chronic:
  Similar to other interstitial lung diseases
  Cough-nonproductive,dyspnoea, basilar rales and abn PFT with persistent infiltrates
  HP:fibrosis, necrosis,plasma cell infiltration with
  IF: mmune complex in alveolar wall

Lupus pneumonitis contd..

Diagnosis is one of exclusion

- D/D
  - Infective consolidation
  - Pulmonary hemorrhage
- Treatment:
  - acute- steroids,immunosuppressants if steroid unresponsive
  - chronic- asymptomatic:no treatment; poor prognosis if PFT abn
- Prognosis:
  - poor; 50% mortality
  - sequelae for survivors is severe restrictive lung disease

THANK YOU